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☐ 1. Document ID: WO 9915652 A1

Using default format because multiple data bases are involved.

L1: Entry 1 of 4

File: EPAB

Apr 1, 1999

PUB-NO: WO009915652A1

DOCUMENT-IDENTIFIER: WO 9915652 A1

TITLE: MEGSIN PROTEIN

PUBN-DATE: April 1, 1999

INVENTOR-INFORMATION:

NAME

COUNTRY

MIYATA, TOSHIO

JP

INT-CL (IPC): C12 N 15/12; C12 P 21/02; C12 N 1/21; C07 K 14/47; C07 K 16/18; G01 N 33/53; A01 K 67/027; C12 P 21/08

EUR-CL (EPC): C07K014/47

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Drawings
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☐ 2. Document ID: US 20040062274 A1, WO 200031996 A2, AU 200020123 A, BR 9915652 A, EP 1133886 A2, KR 2001080562 A, TW 444460 A, ZA 200103992 A, CN 1333981 A, MX 2001005147 A1, JP 2002531026 W, AU 766016 B, AU 2003231679 A1

L1: Entry 2 of 4

File: DWPI

Apr 1, 2004

DERWENT-ACC-NO: 2000-542966

DERWENT-WEEK: 200425

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TITLE: Discontinuous data transmission method for mobile communication adaptive multi rate system, involves transmitting silent descriptor frames between system components based on detected period of source data inactivity

INVENTOR: BLOCHER, P; BRUHN, S ; HAKANSSON, S ; HELLWIG, K ; BLOECHER, P

PRIORITY-DATA: 1999US-0444368 (November 22, 1999), 1998US-109694P (November 24, 1998), 2003AU-0231679 (August 7, 2003), 2003US-0676342 (October 1, 2003)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

US 20040062274 A1

April 1, 2004

000

H04J003/16

KR 2001030648 A, AU 200227633 A

L1: Entry 4 of 4

File: DWPI

Aug 20, 2002

DERWENT-ACC-NO: 1999-276983

DERWENT-WEEK: 200258

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TITLE: Megsin protein expressed specifically in mesangial cells

INVENTOR: MIYATA, T

PRIORITY-DATA: 1997JP-0275302 (September 22, 1997), 2002AU-0027633 (March 25, 2002)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 2000512944 X</u>	August 20, 2002		000	C12N015/09
<u>WO 9915652 A1</u>	April 1, 1999	J	100	C12N015/12
<u>AU 9890963 A</u>	April 12, 1999		000	
<u>EP 1018551 A1</u>	July 12, 2000	E	000	C12N015/12
<u>KR 2001030648 A</u>	April 16, 2001		000	C07K014/00
<u>AU 200227633 A</u>	May 16, 2002		000	A01K067/027

INT-CL (IPC): A01 K 67/027; C07 K 14/00; C07 K 14/47; C07 K 16/18; C12 N 1/21; C12 N 15/09; C12 N 15/12; C12 P 21/02; C12 P 21/08; G01 N 33/53

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Draw. D.
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Terms	Documents
9915652	4

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<u>WO 200031996 A2</u>	June 2, 2000	E	056	H04Q007/30
<u>AU 200020123 A</u>	June 13, 2000		000	
<u>BR 9915652 A</u>	August 7, 2001		000	H04Q007/30
<u>EP 1133886 A2</u>	September 19, 2001	E	000	H04Q007/30
<u>KR 2001080562 A</u>	August 22, 2001		000	H04B014/04
<u>TW 444460 A</u>	July 1, 2001		000	H04L012/00
<u>ZA 200103992 A</u>	February 27, 2002		065	H04Q000/00
<u>CN 1333981 A</u>	January 30, 2002		000	H04Q007/30
<u>MX 2001005147 A1</u>	August 1, 2001		000	H04Q007/30
<u>JP 2002531026 W</u>	September 17, 2002		054	H04J003/00
<u>AU 766016 B</u>	October 9, 2003		000	H04Q007/30
<u>AU 2003231679 A1</u>	September 11, 2003		000	H04Q007/30

INT-CL (IPC): G10 L 11/02; G10 L 19/00; H04 B 14/04; H04 J 3/00; H04 J 3/16; H04 L 12/00; H04 Q 0/00; H04 Q 7/30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
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☐ 3. Document ID: WO 9934639 A2, FI 9704532 A, AU 9915652 A, EP 1038241 A2, FI 109073 B1, US 6587899 B1

L1: Entry 3 of 4

File: DWPI

Jul 8, 1999

DERWENT-ACC-NO: 1999-405622

DERWENT-WEEK: 200347

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TITLE: Selective data transmission method for telecommunications system such as telephone exchange

INVENTOR: JAERVI, J; POIKOLAINEN, K ; JARVI, J

PRIORITY-DATA: 1997FI-0004532 (December 16, 1997)


#### PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 9934639 A2</u>	July 8, 1999	E	015	H04Q011/04
<u>FI 9704532 A</u>	June 17, 1999		000	H04Q000/00
<u>AU 9915652 A</u>	July 19, 1999		000	H04Q011/04
<u>EP 1038241 A2</u>	September 27, 2000	E	000	G06F017/30
<u>FI 109073 B1</u>	May 15, 2002		000	H04Q011/04
<u>US 6587899 B1</u>	July 1, 2003		000	G06F013/14

INT-CL (IPC): G06 F 13/14; G06 F 13/36; G06 F 13/364; G06 F 13/38; G06 F 17/30; H04 Q 0/00; H04 Q 3/545; H04 Q 11/04

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
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☐ 4. Document ID: JP 2000512944 X, WO 9915652 A1, AU 9890963 A, EP 1018551 A1,

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Hosted by NCSC US	Mirror sites:	Australia	Bolivia	Brazil <b>new</b>	Canada	China	Korea	Switzerland	Taiwan

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## Search in Swiss-Prot and TrEMBL for: megsin

**Swiss-Prot Release 45.5 of 04-Jan-2005**

**TrEMBL Release 28.5 of 04-Jan-2005**

- 
- Number of sequences found in Swiss-Prot<sub>(2)</sub> and TrEMBL<sub>(1)</sub>: 3
  - Note that the selected sequences can be saved to a file to be later retrieved; to do so, go to the bottom of this page.
  - For more directed searches, you can use the Sequence Retrieval System SRS.
- 

### Search in Swiss-Prot: There are matches to 2 out of 167089 entries

#### SPB7\_HUMAN (O75635)

Megin (TP55) (Serpine B7). {GENE: Name=SERPINB7} - Homo sapiens (Human)

#### SPB7\_MOUSE (Q9D695)

Megin (Serpine B7). {GENE: Name=Serpineb7} - Mus musculus (Mouse)

---

### Search in TrEMBL: There are matches to 1 out of 1560235 entries

#### Q920J5

Megin {GENE:Name=Serpineb7} - Rattus norvegicus (Rat)

---

in Swiss-Prot/TrEMBL by AC, ID, description,  
gene name, organism


**Please do NOT use any boolean operators (and,  
or, etc.)**


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If you would like to retrieve all the Swiss-Prot/TrEMBL entries contained in this list, you can enter a file name. These entries will then be saved to a file under this name in the directory outgoing of the ExPASy anonymous ftp server, from where you can download it. (Please note that this temporary file will only be kept for 1 week.)

File name: Format: ☒ Swiss-Prot ☐ Fasta

or

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# NiceProt

## View of

## TrEMBL:

## Q6P3F8

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### Entry information

Entry name	<b>Q6P3F8</b>
Primary accession number	<b>Q6P3F8</b>
Secondary accession numbers	None
Entered in TrEMBL in	Release 27, July 2004
Sequence was last modified in	Release 27, July 2004
Annotations were last modified in	Release 27, July 2004

### Name and origin of the protein


Protein name	<b>Serine (Or cysteine) proteinase inhibitor, clade B, member 7</b>
Synonyms	None
Gene name	<b>Name: Serpinb7</b>
From	Mus musculus (Mouse) [TaxID: 10090]
Taxonomy	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

### References

#### [1] NUCLEOTIDE SEQUENCE.

TISSUE=Jaw and Limb;

DOI=10.1073/pnas.242603899;MEDLINE=22388257;PubMed=12477932 [NCBI, ExPASy, EBI, Israel, Japan]

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., , Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

#### [2] NUCLEOTIDE SEQUENCE.

TISSUE=Jaw and Limb;

Strausberg R.;

Submitted (DEC-2003) to the EMBL/GenBank/DDJB databases.

### Comments

- **FUNCTION:** Component of the nuclear pore complex, a complex required for the trafficking

across the nuclear membrane (*By similarity*).

- **SUBCELLULAR LOCATION:** Central region of the nuclear pore complex, within the transporter. Localizes on both cytoplasmic and nucleoplasmic sides of the nuclear pore complex near the central gated channel (*By similarity*).
- **DOMAIN:** Contains FG repeats (*By similarity*).
- **SIMILARITY:** Belongs to the serpin family.

#### Cross-references

EMBL	BC064004; AAH64004.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence]
HSSP	P05121; 1A7C. [HSSP ENTRY / PDB]
	GO:0004867; Molecular function: serine-type endopeptidase inhibitor activity ( <i>inferred from electronic annotation</i> ).
GO	QuickGo view.
InterPro	IPR000215; Prot_inh_serpin. Graphical view of domain structure.
Pfam	PF00079; Serpin; 1. Pfam graphical view of domain structure.
SMART	SM00093; SERPIN; 1.
PROSITE	PS00284; SERPIN; UNKNOWN_1.
ProDom	[Domain structure / List of seq. sharing at least 1 domain]
HOVERGEN	[Family / Alignment / Tree]
ProtoMap	Q6P3F8.
PRESAGE	Q6P3F8.
ModBase	Q6P3F8.
SMR	Q6P3F8; 3C240272A9FB935E.
SWISS-2DPAGE	Get region on 2D PAGE.
UniRef	View cluster of proteins with at least 50% / 90% identity.

#### Keywords

**Coiled coil; Nuclear protein; Protease inhibitor; Repeat; Serine protease inhibitor; Serpin; Transport.**

#### Features

None

#### Sequence information

Length: **380** Molecular weight: **43020** Da CRC64: **3C240272A9FB935E** [This is a checksum on the sequence]

10	20	30	40	50	60
MASLAAANAE	FGFDLFREMD	SSQGNGNVFF	SSLSIFTALT	LIRLGARGDC	ARQIDKALHF
70	80	90	100	110	120
NIPSRQGNSS	NNQPGLQYQL	KRVLADINSS	HKDYELSIAT	GVFAEKVYDF	HKNYIECAEN
130	140	150	160	170	180
LYNAKVERVD	FTNDVQDTRF	KINKWIENET	HGKIKKVLGD	SSLSSSAVMV	LVNAVYFKGK
190	200	210	220	230	240
WKSFTTKTDT	LSCRFRSPTC	PGKVVNMHQ	ERRFNLSTIQ	QPPMQVLELQ	YHGGISMYIM

```

      250      260      270      280      290      300
LPEDGLCEIE SKLSFQNLMD WANRRKMKSQ YVNVFLPQFK IEKNYEMTHH LKSLGLKDIF

      310      320      330      340      350      360
DESSADLSGI ASGGRLYVSK LMHKSFIEVS EEGTEATAAT ENNIVEKQLP ESTVFRADRP

      370      380
FLFVIKKNDI ILFTGKVSCP

```

Q6P3F8 in FASTA  
format

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*View entry in raw text format (no links)*

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**BLAST** BLAST submission on  
ExPASy/SIB  
or at NCBI (USA)




Sequence analysis tools: ProtParam, ProtScale,  
Compute pI/Mw, PeptideMass, PeptideCutter,  
Dotlet (Java)



ScanProsite, MotifScan



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If results of this search are reported or published, please mention that the computation was performed at the SIB using the BLAST network service. The SIB BLAST network service uses a server developed at SIB and the NCBI BLAST 2 software.

In case of problems, please read the [online BLAST help](#).  
If your question is not covered, please contact [<helpdesk@expasy.org>](mailto:helpdesk@expasy.org).

NCBI BLAST program reference [PMID:9254694]:

Altschul S.F., Madden T.L., Schäffer A.A., Zhang J., Zhang Z., Miller W., Lipman D.J. Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. Nucleic Acids Res. 25:3389-3402(1997).

Query: 15 AA

Date run: 2005-01-27 10:03:50 UTC+0100 on sib-gml.unil.ch

Program: NCBI BLASTP 1.5.4-Paracel [2003-06-05]

Database: EXPASY/UniProt

1,737,387 sequences; 556,730,939 total letters

UniProt Release 3.5 consists of: Swiss-Prot Release 45.5 of 04-Jan-2005: 167089 en  
TrEMBL Release 28.5 of 04-Jan-2005: 1560235 entrie

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[NiceBlast view](#)

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#### List of potentially matching sequences

Send selected sequences to

☐ Include query sequence

Db AC	Description	Score	E-value
<input type="checkbox"/> sp <a href="#">O75635</a>	SPB7_HUMAN Megsin (TP55) (Serp	55	2e-07
<input type="checkbox"/> sp <a href="#">Q9D695</a>	SPB7_MOUSE Megsin (Serp	46	7e-05
<input type="checkbox"/> tr <a href="#">Q920J5</a>	Megsin [Serp	46	7e-05
<input type="checkbox"/> tr <a href="#">Q6P3F8</a>	Serine (Or cysteine) proteinase inhibitor, clade B, me...	46	7e-05

#### Graphical overview of the alignments

to resubmit your query after masking regions matching [PROSITE](#) profiles or [Pfam](#) HMMs

([Help](#)) (use [ScanProsite](#) for more details about PROSITE matches)

Profile hits			
Pfam hits			
	Matches on query sequence		Mat
Submission	1		1
SPB7_HUMAN			
SPB7_MOUSE			
Q920J5			
Q6P3F8			
Submission	1		
Identity	0	25	50 75 100%

### Alignments

sp [O75635](#) Megsin (TP55) (Serp in B7) [SERPINB7] [Homo sapiens] 380 AA  
 SPB7\_HUMAN (Human)]  
[align](#)

Score = 54.5 bits (121), Expect = 2e-07  
 Identities = 15/15 (100%), Positives = 15/15 (100%)

Query: 1 FREMDDNQGNQGVFF 15  
 FREMDDNQGNQGVFF  
 Sbjct: 16 FREMDDNQGNQGVFF 30

sp [Q9D695](#) Megsin (Serp in B7) [Serp in b7] [Mus musculus (Mouse)] 380 AA  
 SPB7\_MOUSE  
[align](#)

Score = 46.0 bits (101), Expect = 7e-05  
 Identities = 13/15 (86%), Positives = 13/15 (86%)

Query: 1 FREMDDNQGNQGVFF 15  
 FREMD QGNQGVFF  
 Sbjct: 16 FREMDSSQGNQGVFF 30

tr [Q920J5](#) Megsin [Serp in b7] [Rattus norvegicus (Rat)] 380 AA  
[align](#)

Score = 46.0 bits (101), Expect = 7e-05  
 Identities = 13/15 (86%), Positives = 13/15 (86%)

Query: 1 FREMDDNQGNQGVFF 15

FREMD QGNGNVFF  
Sbjct: 16 FREMDSSQGNGNVFF 30

tr Q6P3F8 **Serine (Or cysteine) proteinase inhibitor, clade B, member 7** 380 AA  
[Serpib7] [Mus musculus (Mouse)]

align

Score = 46.0 bits (101), Expect = 7e-05  
Identities = 13/15 (86%), Positives = 13/15 (86%)

Query: 1 FREMDNQGNGNVFF 15  
FREMD QGNGNVFF  
Sbjct: 16 FREMDSSQGNGNVFF 30

Database: EXPASY/UniProt  
Posted date: Jan 3, 2005 6:58 PM  
Number of letters in database: 556,730,939  
Number of sequences in database: 1,737,387

Lambda K H  
0.333 0.281 1.80

Gapped  
Lambda K H  
0.294 0.110 0.610

Matrix: PAM30  
Gap Penalties: Existence: 9, Extension: 1  
Number of HSP's successfully gapped in prelim test: 0  
length of query: 15  
length of database: 556,730,939  
effective HSP length: 6  
effective length of query: 9  
effective length of database: 546,306,617  
effective search space: 4916759553  
effective search space used: 4916759553  
T: 16  
A: 40  
X1: 15 ( 7.2 bits)  
X2: 35 (14.8 bits)  
X3: 58 (24.6 bits)  
S1: 41 (21.6 bits)  
S2: 61 (29.1 bits)

Wallclock time: 118 seconds

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### Entry information

Entry name **Q920J5**  
 Primary accession number **Q920J5**  
 Secondary accession numbers None  
 Entered in TrEMBL in Release 19, December 2001  
 Sequence was last modified in Release 19, December 2001  
 Annotations were last modified in Release 26, March 2004

### Name and origin of the protein

Protein name **Megsin**  
 Synonyms None  
 Gene name **Name: Serpinb7**  
 From **Rattus norvegicus (Rat) [TaxID: 10116]**  
 Taxonomy **Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.**

### References

[1] NUCLEOTIDE SEQUENCE:  
 MEDLINE=21368006;PubMed=11473647 [NCBI, ExPASy, EBI, Israel, Japan]  
 Nangaku M., Miyata T., Suzuki D., Umezono T., Hashimoto T., Wada T., Yagi M., Nagano N., Inagi R., Kurokawa K.;  
 "Cloning of rodent megsin revealed its up-regulation in mesangioproliferative nephritis."  
 Kidney Int. 60:641-652(2001).

### Comments

- **FUNCTION:** Component of the nuclear pore complex, a complex required for the trafficking across the nuclear membrane (*By similarity*).
- **SUBCELLULAR LOCATION:** Central region of the nuclear pore complex, within the transporter. Localizes on both cytoplasmic and nucleoplasmic sides of the nuclear pore complex near the central gated channel (*By similarity*).
- **DOMAIN:** Contains FG repeats (*By similarity*).
- **SIMILARITY:** Belongs to the serpin family.

### Cross-references

EMBL AF105329; AAL16769.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence]  
HSSP P05121; 1A7C. [HSSP ENTRY / PDB]  
Ensembl ENSRNOG00000002555; Rattus norvegicus. [Contig view]  
RGD 71063; Serpinb7.  
GeneLynx Serpinb7; Rattus norvegicus.  
GO GO:0004867; Molecular function: serine-type endopeptidase inhibitor activity  
(inferred from electronic annotation).  
QuickGo  
view.  
InterPro IPR000215; Prot\_inh\_serpin.  
Graphical view of domain structure.  
Pfam PF00079; Serpin; 1.  
Pfam graphical view of domain structure.  
SMART SM00093; SERPIN; 1.  
PROSITE PS00284; SERPIN; UNKNOWN\_1.  
ProDom [Domain structure / List of seq. sharing at least 1 domain]  
HOVERGEN [Family / Alignment / Tree]  
ProtoMap Q920J5.  
PRESAGE Q920J5.  
ModBase Q920J5.  
SMR Q920J5; D8076CA8EE2C2FBC.  
SWISS-2DPAGE Get region on 2D PAGE.  
UniRef View cluster of proteins with at least 50% / 90% identity.

**Keywords**

**Coiled coil; Nuclear protein; Protease inhibitor; Repeat; Serine protease inhibitor; Serpin; Transport.**

**Features**

None

**Sequence information**

Length: **380** Molecular weight: **42820** CRC64: **D8076CA8EE2C2FBC** [This is a checksum on the  
AA Da sequence]

10	20	30	40	50	60
MASLAAANAE	FGFDLFREMD	SSQGNGNVFF	SSLSIFTALS	LIRLGARGDC	ARQIDKALHF
70	80	90	100	110	120
ISPSRQGNSS	NSQLGLQYQL	KRVLADINSS	HKDYELSIAN	GVFAEKVFDF	HKSYMCAEN
130	140	150	160	170	180
LYNAKVERVD	FTNDIQETRF	KINKWIENET	HGKIKKVLGD	SSLSSSAVMV	LVNAVYFKGK
190	200	210	220	230	240
WKSFTKSDT	LSCHFRSPSG	PGKAVNMMHQ	ERRFNLSTIQ	EPPMQILELQ	YHGGISMYIM
250	260	270	280	290	300
LPEDDLSEIE	SKLSFQNLMD	WTNSRKMKSQ	YVNVFLPQFK	IEKDYEMRSH	LKSVGLEDIF
310	320	330	340	350	360
VESRADLSGI	ASGGRLYVSK	LMHKSLIEVS	EEGTEATAAT	ESNIVEKLLP	ESTVFRADRP

370 380  
FLFVIRKNGI ILFTGKVSCP

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*Request for annotation of this TrEMBL entry*

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ExPASy/SIB  
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Sequence analysis tools: ProtParam, ProtScale,  
Compute pI/Mw, PeptideMass, PeptideCutter,  
Dotlet (Java)



ScanProsite, MotifScan



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[\[Features\]](#) [\[Sequence\]](#) [\[Tools\]](#)

*Note: most headings are clickable, even if they don't appear as links. They link to the user manual or other documents.*

### Entry information

Entry name **SPB7\_MOUSE**Primary accession number **Q9D695**Secondary accession numbers **None**Entered in Swiss-Prot in **Release 42, October 2003**Sequence was last modified in **Release 42, October 2003**Annotations were last modified in **Release 44, July 2004**

### Name and origin of the protein

Protein name **Megsin**Synonym **Serpin B7**Gene name **Name: Serpinb7**From **Mus musculus (Mouse) [TaxID: 10090]**

Taxonomy **Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;  
 Mus.**

### References

#### [1] NUCLEOTIDE SEQUENCE.

DOI=10.1046/j.1523-1755.2001.060002641.x;MEDLINE=21368006;PubMed=11473647 [NCBI, ExPASy, EBI, Israel, Japan]

Nangaku M., Miyata T., Suzuki D., Umezono T., Hashimoto T., Wada T., Yagi M., Nagano N., Inagi R., Kurokawa K.;

"Cloning of rodent megsin revealed its up-regulation in mesangioproliferative nephritis."; Kidney Int. 60:641-652(2001).

#### [2] NUCLEOTIDE SEQUENCE.

**STRAIN=C57BL/6J;**

**TISSUE=Skin;**

DOI=10.1038/nature01266;MEDLINE=22354683;PubMed=12466851 [NCBI, ExPASy, EBI, Israel, Japan]

Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S., Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H., Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach

C., Gojobori T., Baldarelli R., , Hayashizaki Y.;

"Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";  
Nature 420:563-573(2002).

### Comments

- **FUNCTION:** Might function as an inhibitor of Lys-specific proteases. Might influence the maturation of megakaryocytes via its action as a serpin (*By similarity*).
- **SUBCELLULAR LOCATION:** Cytoplasmic (*By similarity*).
- **SIMILARITY:** Belongs to the serpin family. Ov-serpin subfamily.

### Copyright

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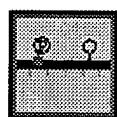
### Cross-references

EMBL	AF105328; AAL16768.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence]
	AK014524; BAB29410.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence]
HSSP	P05121; 1A7C. [HSSP ENTRY / PDB]
MGD	MGI:2151053; Serpinb7.
CleanEx	MGI:2151053; Serpinb7.
GeneLynx	Serpinb7; Mus musculus.
SOURCE	Serpinb7; Mus musculus.
InterPro	IPR000215; Prot_inh_serpin. Graphical view of domain structure.
Pfam	PF00079; Serpin; 1. Pfam graphical view of domain structure.
SMART	SM00093; SERPIN; 1.
PROSITE	PS00284; SERPIN; 1.
ProDom	[Domain structure / List of seq. sharing at least 1 domain]
HOVERGEN	[Family / Alignment / Tree]
BLOCKS	Q9D695.
ProtoNet	Q9D695.
ProtoMap	Q9D695.
PRESAGE	Q9D695.
DIP	Q9D695.
ModBase	Q9D695.
SMR	Q9D695; C9240272BCFB9CF4.
SWISS-2DPAGE	Get region on 2D PAGE.
UniRef	View cluster of proteins with at least 50% / 90% identity.

### Keywords

Serine protease inhibitor; Serpin.

### Features



Feature table viewer

Key	From	To	Length	Description
SITE	347	348	2	Reactive bond ( <i>By similarity</i> ).



**Sequence information**

Length: **380** Molecular weight: **43050** CRC64: **C9240272BCFB9CF4** [This is a checksum on the AA Da sequence]

```

      10      20      30      40      50      60
MASLAAANAE FGFDLFREMD SSQGNNGNVFF SLSIFTALT LIRLGARGDC ARQIDKALHF

      70      80      90     100     110     120
NIPSRQGNSS NNQPGLOYQL KRVLADINSS HKDYELSIAT GVFAEKVYDF HKNYIECAEN

     130     140     150     160     170     180
LYNAKVERVD FTNDVQDTRF KINKWIENET HGKIKKVLGD SSLSSSAVMV LVNAVYFKGK

     190     200     210     220     230     240
WKSFTTKTDT LSCFRSPTC PGKVNNMMHQ ERRFNLSTIQ QPPMQVLELQ YHGGISMYIM

     250     260     270     280     290     300
LPEDGLCEIE SKLSFQNLMD WTNRRKMSQ YVNVFLPQFK IEKNYEMTHH LKSLGLKDIF

     310     320     330     340     350     360
DESSADLSGI ASGGRLYVSK LMHKSFIEVS EEGTEATAAT ENNIVEKQLP ESTVFRADRP

     370     380
FLFVIKKNDI ILFTGKVSCP

```

Q9D695 in FASTA  
format

*View entry in original Swiss-Prot format*

*View entry in raw text format (no links)*

*Report form for errors/updates in this Swiss-Prot entry*

**BLAST** BLAST submission on  
ExPASy/SIB  
or at NCBI (USA)



Sequence analysis tools: ProtParam, ProtScale,  
Compute pI/Mw, PeptideMass, PeptideCutter,  
Dotlet (Java)



ScanProsite, MotifScan



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Search  for

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Welcome to the SIB BLAST Network Service

If results of this search are reported or published, please mention that the computation was performed at the SIB using the BLAST network service. The SIB BLAST network service uses a server developed at SIB and the NCBI BLAST 2 software.

In case of problems, please read the [online BLAST help](#).  
If your question is not covered, please contact [<helpdesk@expasy.org>](mailto:helpdesk@expasy.org).

NCBI BLAST program reference [PMID:9254694]:

Altschul S.F., Madden T.L., Schäffer A.A., Zhang J., Zhang Z., Miller W., Lipman D.J. Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. Nucleic Acids Res. 25:3389-3402(1997).

=====

Query: 15 AA

Date run: 2005-01-27 10:09:32 UTC+0100 on sib-gml.unil.ch

Program: NCBI BLASTP 1.5.4-Paracel [2003-06-05]

Database: EXPASY/UniProt

1,737,387 sequences; 556,730,939 total letters

UniProt Release 3.5 consists of: Swiss-Prot Release 45.5 of 04-Jan-2005: 167089 en  
TrEMBL Release 28.5 of 04-Jan-2005: 1560235 entrie

[Taxonomic view](#)

[NiceBlast view](#)

[Printable view](#)

#### List of potentially matching sequences

Send selected sequences to

☐ Include query sequence

	Db	AC	Description	Score	E-value
<input type="checkbox"/>	sp	<a href="#">O75635</a>	SPB7_HUMAN Megsin (TP55) (Serp1n B7) [SERPINB7] [Homo ...	49	1e-05
<input type="checkbox"/>	sp	<a href="#">Q9D695</a>	SPB7_MOUSE Megsin (Serp1n B7) [Serp1nb7] [Mus musculus...	29	6.6
<input type="checkbox"/>	tr	<a href="#">Q920J5</a>	Megsin [Serp1nb7] [Rattus norvegicus (Rat)]	29	6.6
<input type="checkbox"/>	tr	<a href="#">Q6P3F8</a>	Serine (Or cysteine) proteinase inhibitor, clade B, me...	29	6.6

#### Graphical overview of the alignments

to resubmit your query after masking regions matching [PROSITE](#) profiles or [Pfam](#) HMMs

([Help](#)) (use [ScanProsite](#) for more details about PROSITE matches)

<b>Profile hits</b>			
<b>Pfam hits</b>			
	<b>Matches on query sequence</b>		<b>Mat</b>
<b>Submission</b>	1		1
SPB7_HUMAN			
SPB7_MOUSE			
Q920J5			
Q6P3F8			
<b>Submission</b>	1		
<b>Identity</b>	0	25	50 75 100%

### Alignments

sp [O75635](#) Megsin (TP55) (Serp in B7) [SERPINB7] [Homo sapiens] 380  
 SPB7\_HUMAN (Human)] AA  
[align](#)

Score = 48.6 bits (107), Expect = 1e-05  
 Identities = 15/15 (100%), Positives = 15/15 (100%)

Query: 1 SQSGLQSQLKRVFSD 15  
 SQSGLQSQLKRVFSD  
 Sbjct: 72 SQSGLQSQLKRVFSD 86

sp [Q9D695](#) Megsin (Serp in B7) [Serp in b7] [Mus musculus (Mouse)] 380 AA  
 SPB7\_MOUSE  
[align](#)

Score = 29.5 bits (62), Expect = 6.6  
 Identities = 10/14 (71%), Positives = 10/14 (71%)

Query: 2 QSG LQSQLKRVFSD 15  
 Q GLQ QLKRV D  
 Sbjct: 73 QPGLQYQLKRV LAD 86

tr [Q920J5](#) Megsin [Serp in b7] [Rattus norvegicus (Rat)] 380 AA  
[align](#)

Score = 29.5 bits (62), Expect = 6.6  
 Identities = 11/15 (73%), Positives = 11/15 (73%)

Query: 1 SQSGLQSQLKRVFSD 15

SQ GLQ QLKRV D  
Sbjct: 72 SQLGLQYQLKRVLAD 86

tr Q6P3F8 Serine (Or cysteine) proteinase inhibitor, clade B, member 7 380 AA  
[Serpib7] [Mus musculus (Mouse)]

align

Score = 29.5 bits (62), Expect = 6.6  
Identities = 10/14 (71%), Positives = 10/14 (71%)

Query: 2 QSGLQSQLKRVFSD 15  
Q GLQ QLKRV D  
Sbjct: 73 QPGLQYQLKRVLAD 86

Database: EXPASY/UniProt

Posted date: Jan 3, 2005 6:58 PM  
Number of letters in database: 556,730,939  
Number of sequences in database: 1,737,387

Lambda K H  
0.347 0.287 1.65

Gapped

Lambda K H  
0.294 0.110 0.610

Matrix: PAM30

Gap Penalties: Existence: 9, Extension: 1  
Number of HSP's successfully gapped in prelim test: 0  
length of query: 15  
length of database: 556,730,939  
effective HSP length: 6  
effective length of query: 9  
effective length of database: 546,306,617  
effective search space: 4916759553  
effective search space used: 4916759553

T: 16

A: 40

X1: 14 ( 7.0 bits)

X2: 35 (14.8 bits)

X3: 58 (24.6 bits)

S1: 40 (21.8 bits)

S2: 61 (29.1 bits)

Wallclock time: 127 seconds

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--	--------------------------	-------------------------------	----------------------------	----------------------------------	----------------------------